

Notice of Allowability

Application No.

09/468,053

Examiner

Kelly L. Jerabek

Applicant(s)

OGATA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Request for Continued Examination filed 8/31/2006.
2. ☒ The allowed claim(s) is/are 1,3-9,11,19,21-27,29,37,39-45,47,55,57-63,65 and 73.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNICAL CENTER
PTOL-37 (Rev. 08-06) Notice of Allowability 20061115

DETAILED ACTION

Allowable Subject Matter

Claims 1, 3-9, 11, 19, 21-27, 29, 37, 39-45, 47, 55, 57-63, 65 and 73 are allowed.

The following is an examiner's statement of reasons for allowance:

Re claims 1, 3-9, 11, 19, 21-27 and 29, the prior art fails to teach or suggest, "An image pickup apparatus and method adapted to produce a single image excellent in gradation reproducibility from a plurality of images acquired by sensing an object under different exposure conditions, comprising: means for sensing an object under different exposure conditions to acquire a plurality of images; means for calculating a pixel value for each of the plurality of images; **means for multiplying the pixel value obtained at the calculating step by a factor set based on the exposure condition to calculate a positive value compensation amount; means for compensating the levels of the plurality of images on the basis of the exposure conditions under which they have been sensed respectively, to provide a plurality of compensated images by subtracting the positive value compensation amount from each image; said positive valued compensation amount being calculated by multiplying a level average of each image of a coefficient based on the corresponding exposure**

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condition; said coefficient being selected for each image based on the exposure condition of that image; means for synthesizing the plurality of compensated images to produce a single synthetic image having a wide dynamic range; and means for compressing the synthetic image to an extent depending upon the performance of its output destination to produce a compressed image”.

Re claims 37, 39-45, 47, 55, 57-63 and 65, the prior art fails to teach or suggest, “An image processing apparatus and method adapted to produce a single image excellent in gradation reproducibility from a plurality of input images acquired by sensing an object under different exposure conditions, the apparatus comprising: means for receiving a plurality of input images acquired by sensing an object under different exposure conditions and compensating the levels of the plurality of input images on the basis of the exposure conditions under which they have been sensed respectively, **to provide a plurality of compensated images by subtracting a positive valued compensation amount for each image; said positive valued compensation amount being calculated by multiplying a level average of each image by a coefficient based on the corresponding exposure condition; said coefficient being selected for each image based on the exposure condition of that image; means for calculating a pixel value for each of the plurality of images; means for multiplying the pixel value obtained at the calculating step by a factor set based on the exposure condition to calculate the positive value compensation amount; means for synthesizing the plurality of compensated images to produce a single**

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synthetic image having a wide dynamic range; and means for compressing the synthetic image to an extent depending upon the performance of its output destination to produce a compressed image“.

Re claim 73, the prior art fails to teach or suggest, “An image pickup apparatus adapted to synthesize a plurality of images acquired by sensing an object under different exposure conditions to produce a single image excellent in gradation reproducibility, the apparatus comprising: means for sensing an object under different exposure conditions to acquire a plurality of images; means for calculating a pixel value for each of the plurality of images; **means for multiplying the pixel value obtained at the calculating step by a factor set based on the exposure condition to calculate a positive value compensation amount**; means for synthesizing plural images to produce a single synthetic image having a wide dynamic range; means for compressing either the synthetic image or the dynamic range of the synthetic image to an extent depending upon the performance of its output destination to produce a compressed image; and **means for compensating the level of images supposed thereto to provide compensated images, whereby said compensating means is supplied with either (a) the images acquired by said sensing means to compensate the levels of said images on the basis of the exposure conditions under which said images have been sensed, respectively, by subtracting the positive valued compensation amount from each image; said positive valued compensation amount being calculated by multiplying a level average of each image by a**

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coefficient based on the corresponding exposure condition, and said synthesizing means is supplied with the provided compensated images, or (b) the compressed image and said synthesizing means is supplied with the acquired uncompensated images; said coefficient being selected for each image based on the exposure condition of that image”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Contacts

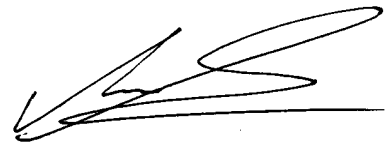
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on **(571) 272-7304**. The fax phone number for submitting all Official communications is **(703) 872-9306**. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600